

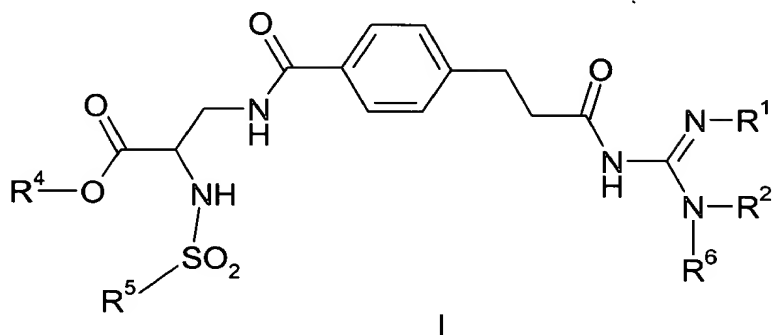
**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. – 10. (Cancelled)

11. (Currently Amended) A process for the preparation of a compound having the general formula I,

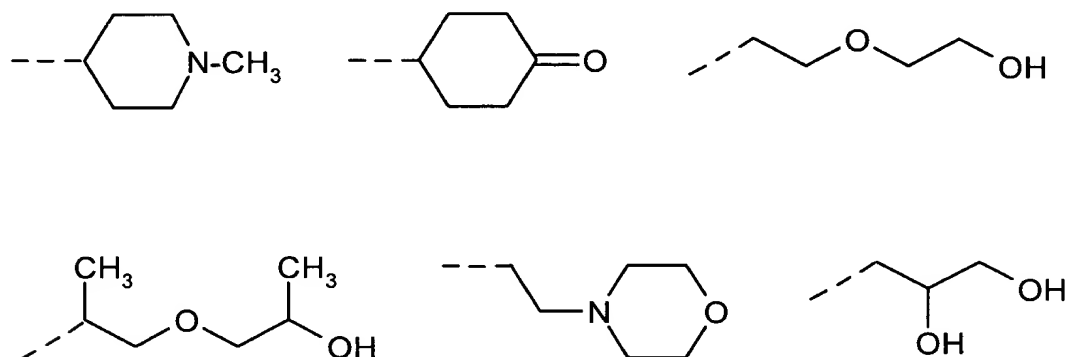


wherein:

$R^1$  and  $R^2$  independently of one another are hydrogen or (C<sub>1</sub>-C<sub>6</sub>)-alkyl which is unsubstituted or substituted by  $R^3$ , or in which the radicals  $R^1$ - and  $R^2$ - together are a saturated or unsaturated bivalent (C<sub>2</sub>-C<sub>9</sub>)-alkylene radical which is unsubstituted or is substituted by one or more groups from the group consisting of halogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>6</sub>-C<sub>14</sub>)-aryl, (C<sub>6</sub>-C<sub>14</sub>)-aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl-, (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl, (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl-, (C<sub>3</sub>-C<sub>12</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>12</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl- and oxo, where a 5-membered to 7-membered saturated or unsaturated ring which is unsubstituted or is substituted by  $R^3$  and which is a carbocyclic ring or a heterocyclic ring containing one or two ring nitrogen atoms, can be fused to a carbon-carbon bond in the (C<sub>2</sub>-C<sub>9</sub>)-alkylene radical;

$R^3$  is (C<sub>1</sub>-C<sub>10</sub>)-alkyl, (C<sub>3</sub>-C<sub>20</sub>)-monocycloalkyl, (C<sub>5</sub>-C<sub>20</sub>)-bicycloalkyl, (C<sub>5</sub>-C<sub>20</sub>)-tricycloalkyl, (C<sub>1</sub>-C<sub>8</sub>)-alkoxy, (C<sub>6</sub>-C<sub>14</sub>)-aryl, (C<sub>6</sub>-C<sub>14</sub>)-aryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl-, (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl, (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl-, halogen, trifluoromethyl, cyano, hydroxyl, oxo, nitro, amino, -NH-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, -N((C<sub>1</sub>-C<sub>4</sub>)-alkyl)<sub>2</sub>, -NH-CO-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, or -CO-(C<sub>1</sub>-C<sub>4</sub>)-alkyl;

$R^4$  is hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl-CO-O-(C<sub>1</sub>-C<sub>4</sub>)-alkyl- or (C<sub>1</sub>-C<sub>6</sub>)-alkyl which is unsubstituted or is substituted by a radical selected from the group consisting of hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkyl-S(O)<sub>2</sub>-, -NR<sup>7</sup>R<sup>7'</sup> and -N<sup>+</sup>R<sup>7</sup>R<sup>7'</sup>R<sup>7''</sup> Q<sup>-</sup>, where R<sup>7</sup>, R<sup>7'</sup> and R<sup>7''</sup> independently of one another are hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>5</sub>-C<sub>14</sub>)-aryl or (C<sub>5</sub>-C<sub>14</sub>)-aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl- and Q<sup>-</sup> is a physiologically tolerable anion, or in which  $R^4$  is one of the radicals



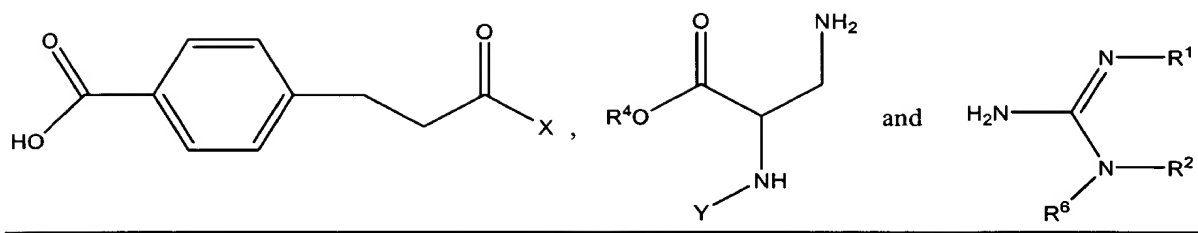
in which the bonds, via which the radicals are bonded, are indicated by dashed lines;

$R^5$  is (C<sub>1</sub>-C<sub>20</sub>)-alkyl, (C<sub>3</sub>-C<sub>20</sub>)-monocycloalkyl, (C<sub>5</sub>-C<sub>20</sub>)-bicycloalkyl, (C<sub>5</sub>-C<sub>20</sub>)-tricycloalkyl, (C<sub>6</sub>-C<sub>14</sub>)-aryl, (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl, (C<sub>6</sub>-C<sub>14</sub>)-aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl- or (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl-, wherein one or more carbon atoms of the alkyl radical, the monocycloalkyl radical, the bicycloalkyl radical and the tricycloalkyl radical is optionally replaced by identical or different atoms selected from the group consisting of nitrogen, oxygen and sulfur, and wherein the aryl radical, the heteroaryl radical, the alkyl radical, the monocycloalkyl radical, the bicycloalkyl radical and the tricycloalkyl radical each is unsubstituted or is substituted by one, two or three radicals  $R^3$ ; and

$R^6$  is hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl-O-CO-, hydroxyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl-O-CO-O- or nitro;

in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs,

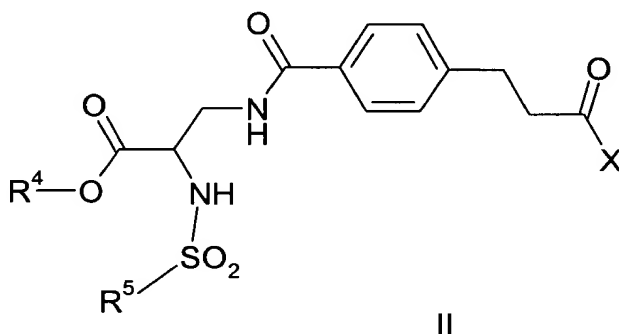
comprising linking two or more fragments which can be derived retrosynthetically from the compound of formula I, **wherein the fragments are:**



where Y is  $\text{SO}_2\text{-R}^5$  and X is a nucleophilically substitutable leaving group.

12. – 22. (Canceled)

23. (Currently Amended) A compound having the general formula II,



II

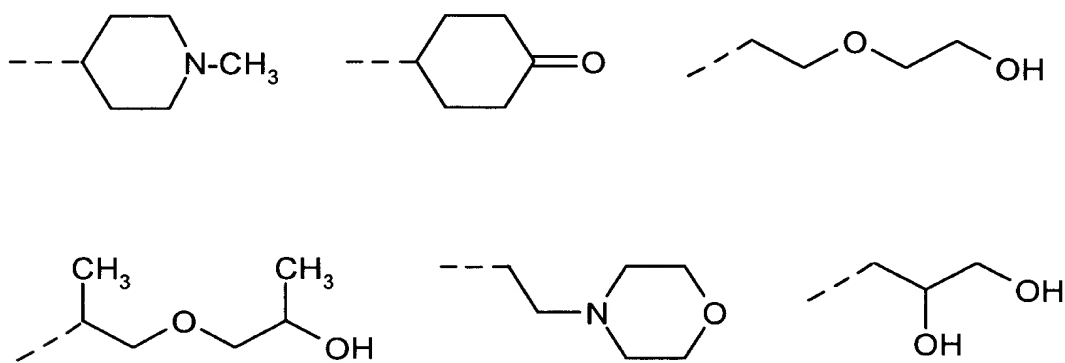
wherein:

$\text{R}^1$  and  $\text{R}^2$  (1) independently of one another are hydrogen or  $(\text{C}_1\text{-C}_6)$ -alkyl which is unsubstituted or substituted by  $\text{R}^3$ , or (2) the radicals  $\text{R}^1$  and  $\text{R}^2$  together are a saturated or unsaturated bivalent  $(\text{C}_2\text{-C}_9)$ -alkylene radical which is unsubstituted or is substituted by one or more groups selected from the group consisting of halogen,  $(\text{C}_1\text{-C}_6)$ -alkyl,  $(\text{C}_1\text{-C}_6)$ -alkoxy,  $(\text{C}_6\text{-C}_{14})$ -aryl,  $(\text{C}_6\text{-C}_{14})$ -aryl- $(\text{C}_1\text{-C}_6)$ -alkyl,  $(\text{C}_5\text{-C}_{14})$ -heteroaryl,  $(\text{C}_5\text{-C}_{14})$ -heteroaryl- $(\text{C}_1\text{-C}_6)$ -alkyl,  $(\text{C}_3\text{-C}_{12})$ -cycloalkyl,  $(\text{C}_3\text{-C}_{12})$ -cycloalkyl- $(\text{C}_1\text{-C}_6)$ -alkyl, and oxo, where a 5-membered to 7-membered saturated or unsaturated ring, which is unsubstituted or is substituted by  $\text{R}^3$  and which is a carbocyclic ring or a heterocyclic ring containing one or two ring nitrogen atoms, can be fused to a carbon-carbon bond in the  $(\text{C}_2\text{-C}_9)$ -alkylene radical;

$\text{R}^3$  is  $(\text{C}_1\text{-C}_{10})$ -alkyl,  $(\text{C}_3\text{-C}_{20})$ -monocycloalkyl,  $(\text{C}_5\text{-C}_{20})$ -bicycloalkyl,  $(\text{C}_5\text{-C}_{20})$ -tricycloalkyl,  $(\text{C}_1\text{-C}_8)$ -alkoxy,  $(\text{C}_6\text{-C}_{14})$ -aryl,  $(\text{C}_6\text{-C}_{14})$ -aryl- $(\text{C}_1\text{-C}_4)$ -alkyl,  $(\text{C}_5\text{-C}_{14})$ -heteroaryl,  $(\text{C}_5\text{-C}_{14})$ -heteroaryl- $(\text{C}_1\text{-C}_4)$ -alkyl, halogen, trifluoromethyl, cyano,

~~hydroxyl, oxo, nitro, amino, NH-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, N((C<sub>1</sub>-C<sub>4</sub>)-alkyl)<sub>2</sub>, NH-CO-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, or CO-(C<sub>1</sub>-C<sub>4</sub>)-alkyl;~~

R<sup>4</sup> is hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl-CO-O-(C<sub>1</sub>-C<sub>4</sub>)-alkyl-, or (C<sub>1</sub>-C<sub>6</sub>)-alkyl, which is unsubstituted or is substituted by a radical selected from the group consisting of hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkyl-S(O)<sub>2</sub>-, -NR<sup>7</sup>R<sup>7'</sup>, and -N<sup>+</sup>R<sup>7</sup>R<sup>7'</sup>R<sup>7''</sup>Q<sup>-</sup>, where R<sup>7</sup>, R<sup>7'</sup>, and R<sup>7''</sup> independently of one another are hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>5</sub>-C<sub>14</sub>)-aryl, or (C<sub>5</sub>-C<sub>14</sub>)-aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl- and Q<sup>-</sup> is a physiologically tolerable anion, or in which R<sup>4</sup> is one of the radicals



in which the bonds, via which the radicals are bonded, are indicated by dashed lines;

R<sup>5</sup> is (C<sub>1</sub>-C<sub>20</sub>)-alkyl, (C<sub>3</sub>-C<sub>20</sub>)-monocycloalkyl, (C<sub>5</sub>-C<sub>20</sub>)-bicycloalkyl, (C<sub>5</sub>-C<sub>20</sub>)-tricycloalkyl, (C<sub>6</sub>-C<sub>14</sub>)-aryl, (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl, (C<sub>6</sub>-C<sub>14</sub>)-aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl- or (C<sub>5</sub>-C<sub>14</sub>)-heteroaryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl-, wherein one or more carbon atoms of the alkyl radical, the monocycloalkyl radical, the bicycloalkyl radical, and the tricycloalkyl radical is optionally replaced by identical or different atoms selected from the group consisting of nitrogen, oxygen, and sulfur, and wherein the aryl radical, the heteroaryl radical, the alkyl radical, the monocycloalkyl radical, the bicycloalkyl radical, and the tricycloalkyl radical each is unsubstituted or is substituted by one, two, or three radicals R<sup>3</sup>;

~~R<sup>6</sup> is hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl-O-CO-, hydroxyl, (C<sub>1</sub>-C<sub>6</sub>)-alkyl-O-CO-O-, or nitro;~~  
and

X is a nucleophilically substitutable leaving group;

in all their stereoisomeric forms and mixtures thereof in all ratios.

24. (Previously Presented) The compound of claim 23, wherein X is selected from the group consisting of hydroxyl, halogen, alkoxy, and aryloxy.

25. (Previously Presented) The compound of claim 24, wherein X is hydroxyl.

26. (Currently Amended) The compound of claim 23 ~~24~~, wherein X is selected from the group consisting of chlorine, bromine, methoxy, ethoxy, phenoxy, pentafluorophenoxy, phenylthio, methylthio, 2-pyridylthio, a radical of a nitrogen heterocycle bonded via a nitrogen atom.

27. (Previously Presented) The compound of claim 23, wherein X is selected from the group consisting of 1-imidazolyl, ((C<sub>1</sub>-C<sub>4</sub>)-alkyl)-O-CO-O-, and tolylsulfonyloxy.